ABSTRACT

An adaptive automatic gain control loop in a radio receiver includes an amplifier with an adjustable gain to variably increase or decrease the signal level of the received signal. Plural data blocks are received, with each data block potentially having a different signal level when received. Before or at the very beginning when substantive data in a data block are processed in the amplifier, the gain of that amplifier is rapidly adjusted or preset to a predetermined signal level for that data block. By adapting the gain of the amplifier before or just as the data in the block are processed by the amplifier to an appropriate level, the received signal can be adjusted to a desired dynamic range. For example, by adapting the received signal level to the dynamic range of an analog-to-digital converter of a receiver, e.g., a UTRA/TDD or TD-SCDMA receiver, the bit error rate at the start of the data block is decreased.